

ABSTRACT

Title: **Biogas Digester: Converting Animal Manure to Chemical Energy and Organic Fertilizer**

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This study was conducted at Quezon National Agricultural School, Silangang Malicboy, Pagbilao, Quezon, from July 2021 to November 2021. The purpose was to address the problem of waste management in the piggery project, determine the viability and efficiency of biogas in providing heat for brooding chickens, and examine the environmental benefits of using the heat from a biogas digester as brooding material and its contribution to sustainable agricultural practices. The collected data were analyzed using both qualitative and quantitative methods. Qualitative data from interviews and observations were analyzed using thematic analysis to identify key themes and patterns. The instruments used in gathering the data included questionnaires and field data sheets, which were validated by the trainers in the Diploma in Agricultural Technology program.

The resulting biogas was utilized as a heat source for brooding, providing a viable alternative to traditional methods. The findings demonstrated the effectiveness of biogas in creating a suitable environment for chick development while reducing the environmental impact of waste disposal. The integration of biogas technology into the swine production program offered a valuable opportunity to equip students with practical skills in sustainable agriculture and environmental stewardship.